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ABSTRACT

This paper offers a synthesis of the existing research on school-based mediation or conflict-resolution programs. Studies of programs in the following six areas are described: Poughkeepsie, New York; New Mexico; Colorado Springs, Colorado; New York City; Chatham County, North Carolina; and Greenfield, Massachusetts. The following elements of each study are highlighted: evaluation goals, school demography, the mediation training program, curriculum, measurement, and evaluation results. A conclusion is that school-based conflict-resolution programs have generally had positive effects on student mediators, the student body, and teachers. Findings, however, are inconclusive because the studies did not use the same evaluation criteria. Findings do suggest that student self-esteem improved and that the programs had high success rates. Suggestions are offered for designing accurate research evaluations of school-based conflict-resolution programs. A program summary chart is included. (LMI)

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THE IMPACT OF CONFLICT RESOLUTION PROGRAMS ON SCHOOLS: A Review and Synthesis of the Evidence

Prepared for the
National Association for Mediation in Education
January 1988

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INTRODUCTION

The last decade has seen increasing interest in teaching conflict resolution in school settings. There has been a proliferation of programmatic and curricular activities which reflect the belief that learning about conflict and its resolution should begin at an early age. Schools are involved in a range of activities: some have developed peer mediation programs; others are creating curricula about conflict resolution; and still others are training school staff in conflict resolution skills.

The formation of the National Association for Mediation in Education (NAME) in 1984 is testimony to the widespread development of school-based conflict resolution programs. The number of schools where conflict resolution or mediation is taught has increased in three years from a mere handful to well over one hundred, and the increasing membership of NAME further attests to the excitement about this field.

Interest in these programs has been stimulated primarily by word-of-mouth accounts of the positive effects of such programs. Reports of an anecdotal nature from the administrators and participants of pioneer programs such as Project SMART in New York City and the Conflict Managers Program in San Francisco have made these programs models for many others. However, with a few exceptions, little research has been conducted on the magnitude and direction of the impact of school mediation programs. It is generally believed in the field, that mediation training makes the student mediators feel better about themselves and contributes to improved school climate, but the basis for these beliefs and the ways training accomplishes these ends are not clearly known.

The purpose of this synthesis is to summarize the existing research on school-based mediation or conflict resolution programs in such a way as to make it accessible to the community practitioners and school administrators who are interested in starting similar programs in their schools. The synthesis of research findings may also be of interest to those already involved in school-based mediation, as they may not be aware of all the studies covered here. Finally, suggestions will be made for designing evaluative research studies of school-based mediation programs.

Executive Director of NAME. As more evaluation results become available, they will be added to this synthesis.

A summary is provided for each of the six studies included. The summaries cover six broad areas: the evaluation goals, a description of the school(s) involved, a description of the mediation training, program, and student mediators, a description of the conflict resolution curriculum, if any, that accompanied the training, a description of the measures used, and a summary of the results of the evaluation. A chart, briefly encapsulating the major points of each study, is also provided for those needing a quick reference source.

Stern, Marilyn and Michael R. Van Slyck
1986 "Enhancing Adolescents' Self-Image: Implementation of a Peer Mediation Program." Paper presented at the meetings of the American Psychological Association, Washington, D.C.

EVALUATION GOAL: To establish an empirical base upon which to make judgements concerning the impact of the school-based peer mediation program and its success in achieving these goals.

1. overall school climate
   student attitudes
   faculty attitudes
   number of disciplinary problems
2. the effect on student peer mediators
   self image
   academic performance
3. effect on student disputants
   number of disciplinary problems
   nature of disciplinary problems

SCHOOL DESCRIPTION: Middle school (grades 6-8) in central New York. 820 students, disproportionate number of remedial program participants, minorities, low income, welfare receipients.

PEER MEDIATORS/PROGRAM: 14 trained in 3 week program led by professional trainer. Chosen to represent cross section of student body. Both "good" kids and "bad" (student council members and leaders of gangs). Racial and gender diversity achieved with 9 Blacks, 5 whites, 5 males, and 9 females.

CURRICULUM: None indicated.

MEASURES:

1. School climate
   a. questionnaire (10 rating scale items from the Discipline Context Inventory) administered to all faculty and students prior to mediation program and at end of school year.

   b. survey seeking general reactions to program administered to faculty at end of school year.

2. Impact on student mediators
   a. two self image scales and three scales from the Lazarus Ways of Coping Scale administered before the training and at the end of the school year.

   b. 13 item questionnaire focusing on the training, leadership, perception of self completed prior to training and at end of school year.

3. Impact on disputants
   a. ratings of satisfaction with the mediation process, compliance with agreement, and subsequent disciplinary problems.

RESULTS:

1. School Climate
   a. student body questionnaire (the number of respondents or sample size is unclear) -- found no differences from Time 1 to Time 2 in student perceptions of involvement in school discipline or general attitude toward the school. However, significant differences were found in the peer mediators' (number of respondents=14) perceptions of school climate. An increase was reported in student mediators being able to take responsibility in school and being able to express their problems.

   b. faculty questionnaire (number of respondents=26) -- statistically[1] significant increases from Time 1 to Time 2 in perceptions of student participation in solving school problems, feelings of school involvement, responsibility for enforcing rules, perceptions of school discipline as good, and staff-student ability to discuss problems. Half made referrals to the mediation program. 12 of 15 reported that they felt conflict had decreased in the school.

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[1] The concept "statistical significance" is linked to hypothesis testing. In the case of the studies reviewed here, the hypothesis is generally that there is a significant difference between student scores at Time 1 and Time 2 (before and after conflict resolution training). In order for a difference to be significant it must be large enough that we have confidence it did not just occur by chance. The significance level we choose has to do with how much error we are willing to tolerate. In other words, we have to decide whether or not the difference we find is a "real" difference or one that occurred by chance before we can accept the hypothesis that the Time 1 and Time 2 scores are significantly different. In order to make this decision, confidence levels are set, beyond which a difference will be accepted as statistically significant. Generally, in the social sciences, the .05 level of significance is chosen as the upper limit. In other words, if a particular difference is significant at the .05 level, it could have occurred by chance only five out of 100 (or 5 percent) of the time. Any differences more likely than this to have occurred by chance are rejected as not statistically significant.

2. Peer Mediators (number of respondents=14)
   a. Post-test Morals subscale score significantly higher than pre-test score for both males and females. Indicates that the mediators developed a greater sense of "duty, responsibility, and concern for others" over the course of the mediation program.

   b. Self-image scores increased significantly for both males and females, but more dramatic increase for males (from below average to average).

   c. no difference in preference of problem-based coping style.

   d. Eagerness and enthusiasm about becoming a peer mediator -- increased significantly, especially for males. Significant increase in perceptions of importance of being a good leader. Also significant increase in reported talent for mediation, and a significant correlation between mediator's perception of own talent and supervisor's rating of talent. This was highly correlated with mediator experience.

3. Disputant Satisfaction (81 cases were mediated by student mediators)
   a. 46% involved rumors of a "he said she said" quality, 32% involved harassment, 16% involved a physical fight. 60 of 81 (74%) disputants report that they would have had a fight if they were not referred to mediation.

Jenkins, Jeffrey and Melinda Smith
1987 "Mediation in the Schools 1986-87 Program Evaluation." New Mexico Center for Dispute Resolution, Albuquerque, New Mexico.

EVALUATION GOALS: Assess the impact of the Mediation in the Schools program on students' attitudes concerning interpersonal conflict and approaches to its resolution. Assess the impact of the program in seven areas:

1. Knowledge of approaches to problem solving
2. Development of communication skills
3. Attitudes and behaviors toward conflict and violence
4. Improvement in self-concept and personal outlook
5. Peer relations
6. Attachment to others
7. Committment to and involvement with school activities

SCHOOL DESCRIPTION: Statewide educational program, eight school districts participated, as well as one Bureau of Indian Affairs school and one juvenile correctional facility. A total of 17 elementary schools, five middle/junior high schools, and one high school were involved. Mix of urban and small communities. Native Americans, Hispanics, and Anglos were well represented.

PEER MEDIATORS/PROGRAM: 331 students in grades 4, 5, and 6 were nominated by teachers and peers or volunteered to serve as conflict managers. Final student selection was made by committee, including a balance of negative and positive leadership, race, sex, and ethnicity. These conflict managers went through 12-16 hours of training to learn a 14 step mediation process. Pairs of mediators worked on playground duty.

At middle and high school levels mediators were selected on similar criteria. 53 middle school and 17 high school students participated. 19 females from the youth detention center also participated. Teachers and students were trained in a 14 hour training course. Pairs of students mediated student disputes and a student-adult team mediated student-adult disputes.

CURRICULUM: At the elementary level (4,5,6) teachers were asked to teach a 19 lesson unit on conflict resolution.

MEASURES: One of the goals of the evaluation was to develop instruments to measure the impact of the program on student's attitudes and thus, on their behavior.

1. Student Attitudes About Conflict Scale
   40 rating items developed and tested. These were 4-point scale items (strongly agree through strongly disagree). Much attention paid to constructing the items and to their reliability and validity.

2. Student Observation Form (completed by teachers). Constructed as an alternative means of assessing the program's impact on individual students. 30 item, 6 point scale given to teachers to evaluate individual students

3. Teacher Attitude Scale (completed by teachers). Two parts - 1) 35 items about their personal approach to conflict and 2) 3 items to survey teacher's observations about the occurence of conflict within their schools.

The impact evaluation used a pretest-posttest control group design. In other words, the treatment group received the treatment (mediation training) and the control group did not. Both groups were tested before and after the mediation program was implemented. Treatment group = student mediators, control group = 193 students from two elementary schools and 181 students from two middle schools. No high school control group.

RESULTS:

1. Student Attitudes:

a. elementary school students -- No statistically significant differences between the mediator group and the control group with one exception -- the mediator group gained signficantly more than the control group on the problem solving/ conflict resolution skill subscale.

b. middle school students -- the mediator group had signficantly larger gains than the control group on the total "school attitudes about conflict scale" and on three of the subscales, "school attachment/commitment," "self concept/peer relations," and "knowledge of problem solving/conflict resolution skills."

c. high school students -- Lack of a control group makes comparisons impossible. However, the mediator group had gained points on the total scale and all four subscales at post test (without a control group there is no way of knowing whether these changes can be attributed to the mediation training and program or to some other phenomenon, such as maturation). The mediation program seems to have had little effect on the delinquent group. Their scores declined from Time 1 to Time 2 on the total scale and three of the subscales, improving only on perceptions of social skills and relations.

2. Teachers' Observations of Student Behaviors:

a. elementary school students -- (number of respondents for mediator group = 250, control group = 16). A number of differences between program participants and the

control group were noted including: participants viewed by teachers as more able to summarize ideas, less apt to "take sides" with disputants, and more able to work well with others; participants were also viewed as less likely to fight, raise their voices in anger, use violence, and more likely to break up fights. They don't discuss whether these differences are statistically significant.

b. middle school students -- (N = 30, no control group). No assessment can be made.

c. high school students -- (N = 13, no control group). Again, any differences between students at Time 1 and Time 2 could be attributed to any number of causes.

3. Teacher Attitudes:
(higher total scores indicate a more positive outlook on conflict and its resolution).
a. elementary school teachers -- scores of those with 0 - 5 years experience increased slightly.

b. middle school teachers -- scores of those with 0-5 years experience declined slightly, while those with more than 10 years experience increased slightly.

c. high school teachers -- most striking differences are for high school teachers with 0-5 years experience. Their scores increased almost 8 points. Those with 6-10 years and more than 10 years both decreased slightly. No N's are given and no statistical tests are reported.

4. Conflict in the School Setting:(teachers responded to 3 items).
a. causes of conflicts in school -- verbal harassment increases as most common cause of conflict, while non-verbal harassment, physical harassment, and disruptive behavior all declined in importance.

b. places where conflict occurs -- no change.

c. methods of conflict resolution -- teacher intervention declined almost 15 percentage points, student intervention increased 10 percentage points.

There is some evidence that for elementary school students one of the sub-goals, development of communicative and conflict resolution skills, has been achieved.

Maday, Mike
1987 "Conflict Resolution in the Schools: Final Evaluation Report." Social Science Education Consortium, Inc., Boulder, Colorado.

EVALUATION GOAL: To assess the impact of the Conflict Resolution in the Schools program on the four outcomes specified:

1. Decrease violence and antisocial behavior
2. Teach students new skills in communication and conflict resolution
3. Effect positive attitudes toward peaceful expression and resolution of conflict
4. Prevent attitudes and behaviors that lead to delinquency.

SCHOOL DESCRIPTION: One elementary school and one middle school in Colorado Springs, Colorado. Very little description of the school or students. They don't report any findings from the middle school because no formal mediation program was developed and there was inconsistency across classes in implementing the curriculum. Changes in mean scores from pre- to post-test were negligible in virtually all instances for the middle school.

PEER MEDIATORS/PROGRAM: No background on the students or their training as mediators. The formalized mechanism for mediating was a playground duty set up. They also tried using a suggestion box to get disputes.

CURRICULUM: No information available in the report on the extent of training or classroom time. Telephone conversation with Mike Maday provided further information: The program included a 10 week classroom curriculum. The class met once a week for 30 to 45 minutes. The class was taught by teachers with help from the mediation consultants. The three-part content included conflict definition and analysis, communications skills, and conflict resolution strategies and skills.

MEASURES: (Both quantitative and qualitative measures)

1. Decreasing violence and anti-social behavior (same measures used to assess all impacts)
   a. student attitude survey
   b. teachers' assessments of students
   c. classroom observations
   d. formal and informal teacher and student interviews and surveys

2. Developing positive attitudes toward peaceful expression and resolution of conflict

3. Developing communication and conflict resolution skills

4. Preventing attitudes and behaviors that lead to delinquency

RESULTS:

1. Decreasing violence and anti-social behavior and developing positive attitudes toward peaceful expression and resolution of conflict:

   a. student survey -- little difference between mediators and controls

   b. interviews with teachers and administrators -- reported that the program "had a great deal of impact in reducing violence." Teachers from other grades requested that "problem-solvers" (i.e., mediators) be assigned to their recess periods. The principal reported having "no referrals from the experimental class, which is a big change."

   c. interviews with students -- also "substantiate the conclusion that attitudes toward violent behaviors changed...as a result of the project."

2. Developing communication and conflict resolution skills:

   a. student survey -- statistical data is "neutral to positive." But statistically significant differences in communications skills were not found in the case of any of the items. Of the four items intended to measure conflict resolution and problem solving skills, two showed significant differences in the desired direction (i.e., improvements in these skills).

   b. interviews with students and teachers -- claim strong qualitative evidence for increased communication and conflict resolution skills. There are comments from only 2 teachers and a social worker included, all very positive.

   c. field observations -- student conflict managers applied those skills regularly, proficiency in their use increased in direct relationship to opportunities to apply them, and skills were disseminated throughout the student body by modeling behaviors of the conflict managers.

3. Preventing attitudes and behaviors that lead to delinquency:

   a. student survey -- Of 15 items measuring behavioral changes, two showed statistically significant change in the desired direction (.05 level). Few of the items believed to be related to delinquency showed statistically significant changes. The items dealing with "bonding" and "labeling" were significant at the .05 level, suggesting to the authors that the program had a "salutory" (sic)

impact on delinquency prevention. In addition, there is some statistical evidence that the experimental group students developed an ability to resist the negative influence of delinquent peers.

b. qualitative data -- claim that interviews with teachers, administrators, and students also reflect changes in delinquency and delinquency-related factors. Although the empirical evidence is to the contrary, they claim that teacher reports, observations of student behavior, and student comments "unequivocally" indicate that students felt better about themselves, behaved with greater self-assurance, and generally developed a more positive self-image.

Project S.M.A.R.T. (School Mediators' Alternative Resolution Team Program).

1987 Project S.M.A.R.T.: A School-Based Mediation Program Sponsored by the Victim Services Agency.

This is not an evaluation, per se, but, rather, a program description with some illustrative statistics thrown in.

SCHOOL DESCRIPTION: Project S.M.A.R.T. trains students, parents, and school personnel to mediate disputes between students, between students and parents, and between students and teachers. The program is ongoing in six NYC high schools: William Cullen Bryant, Taft, Eastern District, Far Rockaway, Brandeis, and Prospect Heights, and in one junior high school, Horace Greeley.

PEER MEDIATORS/PROGRAM: S.M.A.R.T. offers an intensive 20 hour mediation training program three times during the school year. The training generally involves up to 25 participants and is conducted within a two to three week span during weekday afternoons. Trained students and adults are available throughout the school day to mediate cases referred by the various school personnel and the local family court. The project coordinator does an intake to determine whether the dispute can be resolved through mediation. The mediators work in pairs (usually two students for a student/student dispute and an adult and a student for student/adult cases. At the time of the report, 349 students and 87 adults had completed the training. These mediators had helped to resolve 1,328 disputes involving 3,235 students.

CURRICULUM: The project coordinator conducts classroom seminars to help students explore their values and problem solving skills and to introduce them to basic tenets and techniques of mediation. The seminars consist of one or two forty minute segments and are done at the request of the teacher, in lieu of regularly scheduled classes.

RESULTS:

1. Suspensions for fighting descreased by 46%, 45%, 70%, 60%, and 65% at five of the high schools during the first year of operation.
2. Over 60 students who went through mediation as disputants subsequently became mediators.
3. Over 10,700 students have attended the classroom seminars.
4. Follow-up interviews indicate that over 90% of mediated agreements remained intact and that the "vast majority" of disputants found the mediation process satisfying and useful.
5. It is now standard procedure for deans to refer all student disputes not involving weapons, drugs, or injuries, to mediation.

Chatham County Dispute Settlement Program (CCDSP)
1985 Conflict Managers Annual Report.

EVALUATION GOAL: To evaluate teachers' and student conflict managers' attitudes toward the program and its effect on student mediators, staff, and the student body.

SCHOOL DESCRIPTION: A rural elementary school with a student population of over 750.

PEER MEDIATORS/PROGRAM: 30 fourth and fifth grade students were chosen by their peers (using the positive and negative leadership model) to be trained as conflict managers. These students received 15 hours of training, the first five being on a teacher's work day and the other 10 spread over a five week period. 29 students successfully completed the program, including 10 males and 19 females and 10 blacks and 19 whites. Conflict managers received certificates and participated in an assembly where they performed role plays for fellow students to demonstrate how the program could help their school. The conflict managers worked in pairs either before school or during lunch for two-week cycles. The conflict managers broke into two smaller groups of 14 each and attended bi-weekly meetings with the project coordinator and school counselor where they discussed problems, shared solutions, and practiced skills. They also kept a journal on their activities and reflections.

CURRICULUM: Three lesson plans on Conflict and Conflict Managers were integrated into the fourth and fifth grade social studies curriculum.

MEASURES:
Conflict Managers' Questionnaire
Evaluation by teachers

RESULTS:
1. The conflict managers intervened in 145 disputes over a 3 month period. Ninety percent of these were successfuly resolved.

2. A video-tape of the Conflict Managers Project was written and produced by the managers themselves.

3. The report does not provide analysis of the conflict managers and teachers evaluation forms but does provide the actual data. The data can be summarized as follows:
   a. Teachers evaluation Form (Number of respondents=25):
      1) benefits of program for conflict managers:
      15 of 25 teachers felt that conflict managers had benefited from the program by gaining leadership

experience. 14 felt that managers had developed decision making skills and 13 saw an increased sense of responsibility among the conflict managers. On the other hand, none of the teachers felt the students had improved academically and only two felt that the managers' thinking was more clear.

2) benefits of program for entire student body:
80% of the teachers indicated that, because of the program, the student body can solve problems with peers instead of relying on adults. About 75% of the teachers felt that the student body learned to solve problems peacefully and had increased respect for and cooperation with others. Only 1 teacher indicated that at times, the student body made a game or joke of the program.

3) benefits of program for staff:
16 of the 25 teachers indicated that the program had benefited staff by allowing staff to give students more responsibility, work with students in more positive ways, and by decreasing the number of discipline problems sent to the office. Nearly half of the teachers felt that they had more time to teach instead of helping students solve problems.

4) successful aspects of the program:
24 of 25 teachers felt that the most successful aspect of the program was that it teaches students to resolve conflicts without adult intervention. Increased positive self image in students was the second most successful aspect of the program (15).

5) changes to the program:
14 of 25 teachers felt that the program should make sure that conflict managers are good role models while on duty. Few teachers indicated other needs for change. Six thought that school-wide involvement should be increased, and five felt the program should provide better explanation of conflict managers responsibilities.

6) additional teacher comments:
-- 20 of 25 teachers strongly agreed that they were adequately informed about the program when it was introduced to the school.
-- On a five point scale, with strongly disagree being 1 and strongly agree being 5, 9 teachers strongly agreed that the program had enhanced the sense of community at their school, and 8 teachers,

each, circled 4 and 3.
-- 15 teachers strongly agreed that the program provides students with a positive way of resolving their conflicts. Seven more circled 4.

b. Conflict Managers' Questionnaire (Number of respondents=20):

1) all 20 wanted to be conflict managers next year.

2) What have you learned?
11 of 20 indicated that they learned how to solve conflicts, problems, and fights. Six learned to control temper, stay calm, not react.

3) What haven't you liked?
13 liked everything. 3 each did not like missing fun activities to attend meetings and go on duty and certain duty times.

4) Frequency of conflict by duty time:
11 of 20 managers felt that the most conflicts occured on the playground, while 12 felt that the fewest conflicts occured in the morning (before school). The cafeteria was in the middle for 10 of the students -- a place where "some conflicts" occured.

5) Being a conflict manager changed how other students and friends deal with you:
8 of 20 said no and 9 said that some friends now treat them better.

6) How can staff support conflict managers?
4 of 20 indicated that they need to make sure that teachers understand what conflict managers are and talk to other students about it. 3 felt that more assemblies and presentations were needed.

7) Do students respect you as conflict manager?
13 of 20 said yes, while 5 said sometimes. (for some reason there were 24 responses to this one) Only one said no and one indicated that some act like I'm too good for them. Two each said that "some are jealous" and "fifth graders have an attitude."

8) other comments:
five indicated that they use conflict management with siblings, and another 5 have improved their own behavior. Nine said that their parents are pleased or proud.

Lam, Julie A.
1987 An Evaluation of the Impact of the Middle School Conflict Managers Program, Greenfield, Massachusetts.

EVALUATION GOAL: To add to the existing knowledge base on the impact of school mediation programs. The program was never implemented (only the training actually took place), therefore, the evaluation only addresses the impact of being trained as a mediator on various indicators.

SCHOOL DESCRIPTION: Middle School (grades 6-8) in western Massachusetts.

PEER MEDIATORS/PROGRAM: 43 students trained in a 15 hour training program. The students were chosen by teachers and counselors or volunteered for the training. The intent was to represent a cross-section of the student body and to train both positive and negative leaders. However, the students participating in the training turned out to be predominately female (83 percent).

CURRICULUM: Conflict resolution was not included in the school curriculum.

MEASURES:

1. Impact of program from Time 1 to Time 2
   a. 10 item scale measuring ways of "dealing with conflict," administered to student trainees.
   b. 10 item scale measuring student trainees' attitudes toward conflict resolution skills, becoming a mediator, and being a leader and follower.

2. How students deal with conflicts at home and school prior to training
   a. open-ended questions asking the students to list three ways deal with conflict at home and three ways they deal with conflict at school.

3. Why students wanted to be trained as mediators
   a. open-ended questions asking students why they signed up for training and what they hoped to get from the training.

4. How students felt about the training
   a. both open-ended and close-ended items about various aspects of the training.

RESULTS:

1. Impact of program from Time 1 to Time 2 (number of respondents=25)

(no control group was used, therefore, it is impossible to say whether or not changes are due to the training or to other factors)

a. There was a statistically significant decrease in the average score for the item "refused to think about it (the conflict)" as a strategy for dealing with conflict, indicating that students were more likely to think about, and not ignore, conflicts when they arose after the training than before.

b. There was also a statistically significant decrease in the average score for the item "kept your feelings to yourself" as a strategy for dealing with conflict, indicating that students were more likely to express their feelings about a conflict after the training than before.

Differences in scores from Time 1 to Time 2 were not statistically significant for any other items.

2. How students deal with conflicts at home and school prior to training (number of responses for school=98, for home=88 (most students gave multiple responses))

a. The most common response for dealing with conflict at school was "talk it out" (24 percent of all responses), followed by "let it go/ignore it" (13 percent) and "yell/argue/get angry" (12 percent).

b. The most common response for dealing with conflict at home was also "talk it out" (22 percent of the responses), followed by "do nothing/ignore" (14 percent), and "talk to parents" (11 percent).

3. Why students wanted to be trained as mediators (number of responses=62)

a. The most common response was "to help people with their problems" (30 percent), followed by "wanted help with my own family problems" (24 percent).

4. What did students hope to get from the training (number of responses=55).

a. The most common response was "wanted to deal with my own problems better" (35 percent), followed by "wanted to learn to help others solve their problems" (26 percent).

5. How students felt about the training (number of respondents=25)

a. Role plays were the favorite part of the training for 54 percent of the students.

b. All of the students indicated that they enjoyed the training.

c. 26 percent of the students would shorten the training, but 22 percent would change nothing about the training.

d. When asked to list 3 things they learned (number of responses=67), the most common response was "how to help people solve problems" (31 percent of all responses), followed by "how to be neutral" (18 percent), and "confidentiality" (16 percent).

SOME ANECDOTAL EVIDENCE

From New York City:

Sample comment from the principal:

-- "The student mediators have a better attitude about school and about themselves because they belong to something special. Many of the mediators were once troublemakers but now have shown tremendous improvement in attendance, achievement, and behavior... Mediation is one of the few programs which has the unqualified enthusiasm and support of parents, teachers, and students."

Sample comment from a student mediator:

-- "The S.M.A.R.T. program has helped me to relate to others by its showing me self control. A few months back, I used to be mean and short-tempered....S.M.A.R.T. has helped me to cope with my own problems, and now I speak more. Sometimes, when I have a mediation case, I have to set an example. What kind of example would I be setting if I lost my control?"

From Colorado:

"Qualitative data revealed a range of additional noteworthy program impacts." Some are:

-- mediation project influenced students outside the experimental group. (Contamination of findings)
-- Increased student responsibility -- "interplay between giving students problem-solving skills and providing them with a structural opportunity to apply those skills."
-- Increased instructional time -- less time dealing with conflicts.
-- Students' increased ability to identify their own feelings and those of others.
-- Improved classroom performance in the area of problem solving.

-- "Field observations clearly showed that students who were conflict managers applied those skills regularly and that proficiency in their use increased in direct relationship to opportunities to apply them."

Some sample student comments:

-- "No one argues or fights anymore. Our teachers don't have all of those problems to deal with."
-- "It helped me a lot because I don't fight anymore."
-- "Well if I was not a problem solver, I would be more violent in solving problems.
-- "It's fun. I love to be a problem-solver. It sort of makes me feel good about myself!"

SUMMARY

The results, as evidenced by both the reviews of each study and the summary table, are generally positive. School-based conflict resolution programs, as reported in these six studies, have at least some positive effects on student mediators, general student body, and teachers. In nearly every case, the qualitative and anecdotal evidence is stronger than the quantitative evidence.

Looking at the summary table it can be seen that none of the studies reported the school mediation programs as having undesirable effects on any of the indicators. There were a few indicators that were not affected by the programs (e.g., general attitude toward school in New York and communication skills in Colorado), but overall, results presented regarding the particular set of indicators used here were all in the desired direction.

Still, the findings are not conclusive. The problem is that, in most cases, no more than three studies examined impacts on the same indicators. Although not a very strong criterion, let us consider three studies finding impact in the desired direction evidence that school mediation programs have been effective in that area. For example, three studies (New York, New Mexico, and North Carolina) all found that their programs had a positive effect on student mediator self image. Hence, we will conclude, based on these six studies, that school mediation programs positively affect mediators' self images. Along the same line of reasoning, the school mediation programs have desirable impacts on student attitudes toward conflict, student mediator problem solving skills, sensitivity to others, leadership experience, and amount of instructional time in the classroom.

Another indicator of a successful mediation program is the success rate of the mediation process. In other words, did the disputants sign a written agreement, and was it still holding up at the time of follow-up. In this sense, success rates for the mediation programs are quite high in the three studies providing such rates. These rates range from about 75 percent to 90 percent. Interestingly however, little of the research has focused on this indicator of a successful program. It seems that the resolution of specific conflicts has not been seen as the interesting question for research, but rather the impact of the programs on student and teacher attitudes and school climate.

Issues in Planning an Evaluation

At this point, the question of the validity of these findings arises. The studies generally make claims of success, broadly defined, and some make even stronger claims of "definite impact." However, the design of the research precludes such claims in most

cases. Many of the comparisons are done without a control group. Those that do have a control group make no effort to establish the comparability of the treatment and control groups. Self-selection (and teacher recommendation) into the mediation program may have as much influence on changes in scores as the program itself. It is extremely difficult to determine whether the desired impacts are due to the mediation program or to other factors (such as student maturation) or some other event that took place during the school year.

The only way to eliminate this problem is through random assignment of students to treatment (i.e., mediation program) and control groups. This eliminates the problem of non-comparable treatment and control groups. Each student has a known probability of being assigned to each group. However, this strategy, while preferable, is not very practical. It essentially makes the mediation training and practice mandatory for the students assigned to that group. Many administrators may not find this desirable.

When it is not possible to use random assignment, the researcher should make every effort to establish the comparability of the treatment and control groups. The students can be matched on demographic characteristics such as sex, race, and age. They can also be matched by academic records, school activity levels, disciplinary records etc. In other words, if the group of students participating in the mediation program are all members of the student council and in the top 10 percent of the class, the control group members should be also.

Another issue regarding the use of control groups pointed out in the Colorado study is the problem of contamination of the control group. If the control group is from the same school as the treatment group, although they may be isolated from the mediation training and curriculum, they may still be exposed to mediation behaviors when conflicts are mediated on the playground or in the cafeteria. Also, their friends may be in the treatment group. Using a control group from another school eliminates this problem.

A point that was made in several of the studies is the importance of making sure there is a program to study before starting. In other words, the mediation program must be implemented in the school so that students get real-life experience with mediating cases. There may be some positive effects of simply training students in mediation skills, but it is likely that effects will be small, and perhaps undetectable, if students cannot practice those skills. As Mike Maday points out in the Colorado study, administrative support for, and commitment to, the program is essential, and a coordinator or administrative

aide is necessary for project implementation. Someone needs to schedule mediation sessions and do other clerical tasks associated with the project in order to insure the project's continuation.

Suggestions for Designing an Evaluation

In addition to administering surveys to treatment and control group students before and after training and again after the students have had a chance to mediate (usually at the end of the school year), interviews with student mediators, students in the control group, student disputants, teachers, and administrators are essential to understanding the impact of these programs. In every case the so-called qualitative data made stronger arguments for the desirable effects of the programs. However, in only a few cases were indications made that these data were gathered in any sort of systematic way. A set of standard open-ended questions should be asked of each of these groups (likely a different set of questions for students vs. teachers, etc.). In this way, responses can be compared and a more compelling argument made. The comments of important parties become data then, rather than anecdotes.

Observations of training sessions and of actual mediation sessions are other important components of an evaluation. The Colorado researchers learned much from their field observation that could not be discovered through a questionnaire.

Another source of data not tapped by most of these studies is the records kept by all schools of such indicators as school attendance, disciplinary action, and academic performance. An evaluative research effort making use of these four forms of data (surveys, interviews, school records and observations) is more valid and reliable and makes a more persuasive argument, whatever the direction of the changes.

School Based Mediation Programs[1]

	NY	NM	CO	NYC	NC	MA
Program Characteristics						
Who's trained:						
Students	yes	yes	yes	yes	yes	yes
Teachers	no	yes	no	yes	no	no
Staff	no	no	no	yes	no	no
Time period covered by study/report	85-86	86-87	86-87	83-87	2/85-5/85	1/87-6/87
# students trained:	14	420	--	349	30	43
# training hours:	--	14	--	20	15	15
Grade levels:	6-8	4-12	elem.	7-12	4-5	6-8
# schools involved:	1	25	1	7	1	1
# lessons in curriculum:	--	19	--	2	3	None
Mediation model:						
pairs	--	yes	--	yes	yes	no program
where/when	--	recess	recess	available all day	before school, at lunch, recess	--
Negative/positive leadership model used	yes	yes	--	--	yes	yes
Racial/ethnic/gender diversity among mediators	yes	yes	--	--	yes	no
# disputes mediated	81	--	--	1,328	145	none
Success rate of mediation agreements	74%	--	--	90%	90%	--

[1] NY = PROUD Program, Poughkeepsie, New York.
NM = Mediation in the Schools Program, New Mexico.
CO = Conflict Resolution in the Schools Project, Colorado Springs, Colorado.
NYC = Project S.M.A.R.T., New York City, New York.
NC = Conflict Managers Program, Chatham County, North Carolina.
MA = Middle School Conflict Managers Program, Greenfield, Massachusetts.

	School Based Mediation Programs					
	NY	NM	CO	NYC	NC	MA
Impact of program on:[2]						
school climate, general	+	--	--	--	--	--
violence/fights	+	--	= to +	+	--	--
detentions/suspensions	--	--	--	+	--	--
general attitude toward school	=	--	--	--	--	--
self image of mediators	+	+	= to +	--	+	--
student attitudes toward conflict	--	+	--	--	+	+
teacher attitudes toward conflict	--	+	--	--	+	--
problem solving skills	--	+	+	--	+	--
school attachment/ committment	+	+	--	--	--	--
communications skills	--	+	=	--	--	--
sensitivity to others	+	--	+	--	+	--
enthusiasm about being a mediator	+	--	--	--	+	=
classroom/academic performance	--	--	+	--	=	--
leadership experience	+	--	--	--	+	+
amount of instructional time	--	+	+	--	+	--

[2] + indicates positive impact (i.e., impact in the desired direction)
- indicates negative impact
= indicates no impact
-- indicates information not available/not measured in this study